



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/881,965	05/16/97	KUZMA	A 42390.P1901R

WM02/0905
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EXAMINER

LEE, R

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 09/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/881,965

Applicant(s)

Kuzma

Examiner

Richard Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 20, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 22-47 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 22-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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1. The request filed on June 20, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/881,965 is acceptable and a CPA has been established. An action on the CPA follows.
2. It is noted that the particular cancellation of original claim 1 and the replacement of claim 1 with identical claim 21 as provided from the amendment filed June 20, 2001 is not proper. All original claims (i.e., claim 1) must remain in the case since these claims will have to be printed at the time of allowance. As such, the particular cancellation of claim 1 as requested has not been entered and it is a requirement for the applicant to cancel claim 21. Claims 1 and 22-47 are pending for examination purposes.
3. Since the claims have been amended and new limitations have been added from the amendment filed June 20, 2001, a new oath or declaration is required (see MPEP 1414.01)
4. Claim 25 is objected to because of the following informalities: At claim 25, line 1, "claim24" should be changed to "claim 24" for clarity. Appropriate correction is required.
5. Claims 38, 40, 41, 42, 43, 46, and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 38, line 3, after "encoded", "real-time" should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 35, line 2;

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(2) claim 40, line 4, after “encoded”, “real-time” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 39, line 2;

(3) claim 41, line 2, “the communication channel” shows no clear antecedent basis;

(4) claim 42, line 6, “the encoded information” shows no clear antecedent basis;

(5) claim 46, line 9, after “encoded”, “real-time” should be properly inserted in order to provide proper antecedent basis for the same as specified at line 2; and

(6) claim 47, lines 2-3, “the real-time data” shows no clear antecedent basis.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claim 39 is rejected under 35 U.S.C. 102(e) as being anticipated by Nonoshita et al of record (5,905,821).

Nonoshita et al discloses a compression/expansion circuit as shown in Figures 1-4, 21 and 22, and the same apparatus as claimed in claim 39, comprising the same encoder (i.e., 118-120 of Figure 22, see columns 1-6) for producing encoded real-time information; compression circuitry (i.e., 121, 122 of Figure 22 and see Figure 21, columns 1-6) coupled to the encoder for producing compressed data based upon a previously stored transmit reference (i.e., compressed image data at reference pixel position, see Figure 22 and see 2 of Figure 2) and the encoded real-time

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information; a plurality of output buffers (see 52 of Figure 1, and 70-73 of Figure 4) coupled to the compression circuitry for storing the compressed data; and a network interface (i.e., 7 of Figure 2) coupled to the plurality of output buffers, the network interface transmitting compressed data from a selected output buffer of the plurality of output buffers, the compressed data from the selected output buffer when used in conjunction with the previously stored transmit reference approximating a next frame expected by a receiving apparatus (see 57 of Figure 1 and columns 5-6).

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 22-28, 31, 34, 35, 38, and 40-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonoshita et al as applied to claim 18 in the above paragraph (7), and further in view of Barberis et al of record (4,320,500).

Nonoshita et al discloses substantially the same apparatus as above, further including a transmit reference buffer (i.e., 2 of Figure 2) for storing a current transmit reference; compression circuitry coupled to the encoder (see Figure 22 and 8 of Figure 2 and columns 3-6) and to the transmit reference buffer (i.e., 2 of Figure 2) for producing compressed data based upon the current transmit reference and the encoded real-time information; wherein the compressed data comprises a differential between the encoded real-time information and the current transmit

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reference (see column 1, columns 5-6); storing differential data in one of a plurality of output buffers, and compressing the differential data prior to storing the differential data in one of the plurality of output buffers (see 52 of Figure 1, 70-73 of Figure 4, and columns 1 and 3-6); and transmitting differential data from the current transmit buffer over the network (see 7 of Figure 2 and columns 3-6).

Nonoshita et al does not particularly disclose, though, the selected output buffer containing compressed data which accommodates one or more characteristics of the network better than compressed data in at least one other buffer of the plurality of output buffers; the selected output buffer contains compressed data which accommodates one or more characteristics of the network better than compressed data in all other buffers of the plurality of output buffers; the contents of a selected output buffer of the plurality of output buffers to be transmitted onto a data communications channel of a network based upon one or more characteristics of the data communications channel; the network interface determining the selected output buffer and transmitting data over the network from the selected output buffer; the selected output buffer contains compressed data which, when used in conjunction with the current transmit reference and the current transmit reference, accommodates the one or more characteristics of the data communications channel better than compressed data from at least another buffer of the plurality of output buffers; wherein the one or more characteristics of the data communications channel include transmission delay on the data communications channel; selecting a selected output buffer with reference to one or more predetermined coding strategies, whether compressed data from

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the selected output buffer is appropriate for transmission to a receiving node; determining whether the differential data in a particular output buffer accommodates one or more characteristics of the network better than differential data in at least one other output buffer of the plurality of buffers; and wherein each of the output buffers is dynamically created and configured in accordance with characteristics of a communication channel being used to transmit the encoded real-time information over the network, wherein the selected output buffer is selected based upon current conditions of the communication channel, and selecting one of the plurality of output buffers as a current transmit buffer based upon current conditions of a communications channel in the network used to transmit the differential data as claimed in claims 22-27, 31, 34, 35, 38, 40-42, 44, and 46.

The particular selection of an output buffer based on characteristics of a network to provided a selected output buffer which accommodates one or more characteristics including transmission delays of the network better than at least one other or all other buffers to be transmitted onto a data communications channel of a network, in general, is old and well recognized in the art, as exemplified by Barberis et al (see column 4, lines 20-63). Therefore, it would have been obvious to one of ordinary skill in the art, having the Nonoshita et al and Barberis et al references in front of him/her and the general knowledge of selected buffer output devices for network channel accommodations, would have had no difficulty in providing the particular selection of an output buffer based on characteristics of a network to provide a selected output buffer which accommodates one or more characteristics including transmission delays of the network better than at least one other or all other buffers to be transmitted onto a data communications channel

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of a network as taught by Barberis et al for the network interface and buffer control as shown in Figures 1 and 2 of Nonoshita et al for the same well known output buffer control for network interface operations purposes as claimed.

10. Claims 32, 33, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nonoshita et al and Barberis et al as applied to claims 22-28, 31, 34, 35, 38-47 in the above paragraphs (7) and (9), and further in view of Jeong of record (5,497,153).

The combination of Nonoshita et al and Barberis et al disclose substantially the same apparatus as above, but does not particularly disclose the encoded real-time information includes video and audio information, and wherein the one or more predetermined coding strategies include minimizing artifacts as claimed in claims 32, 33, and 36. However, Jeong discloses a system for variable length coding and variable length decoding digital data for compression transmission data as shown in Figure 5, and teaches the conventional video and audio real time encodings (see column 1, lines 20-25), as well as coding strategies minimizing artifacts before transmission (i.e., as provided by 52, 54 of Figure 5, and see column 5, line 16 to column 6, line 36). Therefore, it would have been obvious to one of ordinary skill in the art, having the Nonoshita et al, Barberis et al, and Jeong references in front of him/her and the general knowledge of video/audio encoders with coding strategies, would have had no difficulty in providing the video and audio encoder with artifact minimization effects as shown in Figure 5 of Jeong for the compression circuit 8 of Figure 2 of Nonoshita et al for the same well known purposes as claimed.

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11. Claims 29, 30, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nonoshita et al and Barberis et al as applied to claims 22-28, 31, 34, 35, and 38-47 in the above paragraphs (7) and (9), and further in view of Khalil of record (5,343,465).

The combination of Nonoshita et al and Barberis et al disclose substantially the same apparatus as above, but does not particularly disclose wherein the one or more characteristics of the data communications channel include bandwidth availability and burstiness of traffic on the data communications channel, and allocating available bandwidth to achieve a higher frame rate as claimed in claims 29, 30, and 37. However, Khalil discloses a method and system for real time burstiness analysis of network traffic as shown in Figure 1 and 8, and teaches the conventional measuring and analysis of the burstiness of network traffic and allocation of available bandwidth to support specific services (see column 2, lines 27-66). Therefore, it would have been obvious to one of ordinary skill in the art, having the Nonoshita et al, Barberis et al, and Khalil references in front of him/her and the general knowledge of network traffic conditions with bandwidth allocations, would have had no difficulty in providing the burstiness analysis of network traffic with coding strategies including the allocation of available bandwidth for the system as shown in Figure 2 of Nonoshita for the same well known purposes as claimed.

12. Claim 1 is allowed.

13. Regarding the applicant's arguments at pages 10-15 of the amendment filed June 20, 2001 concerning claim 39, and in general that none of the references teach or disclose compressing data

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based upon encoded information as claimed, the Examiner wants to point out that such arguments are deemed moot in view of the above new grounds of rejections.

Regarding the applicant's arguments at pages 15-16 of the amendment filed June 20, 2001 concerning newly added claims 42-47, such limitations have been addressed in the above.

14. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:


(703) 308-6306 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.


RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

9/4/01

